

**REMARKS**

This amendment is in response to the final Office Action mailed on April 19, 2011. All objections and rejections are respectfully traversed.

Claims 1, 12, 22, 28, 37, and 45 have been amended to better claim the invention. No new matter is added by way of this response.

On entry of this amendment, claims 1-50 are currently pending in the application.

Reconsideration and further examination of the application, as amended, is hereby requested.

**I.     Claim Rejections under 35 U.S.C. §112**

In the Office Action, the Examiner rejects claims 1-50 under 35 U.S.C. §112, second paragraph, because the Examiner believes that the claim terms are unclear. See Office Action at pages 2-3. Specifically, the Examiner argues that the phrase ... *so that the simulation may be restored to a state consistent with the simulation context*, as present in the claims, is unclear.

Solely in order to expedite prosecution, Applicants amend the claims to remove the above-identified phrase. Accordingly, Applicants respectfully request that the above 35 U.S.C. §112 rejection of claims 1-50 be withdrawn.

**II.    Claim Rejections Under 35 U.S.C. §103****A.     Claims 1-3, 5-14, 16-23, 25-30, and 32-36**

In the Office Action, claims 1-3, 5-14, 16-23, 25-30, and 32-36 stand rejected under 35 U.S.C. § 103(a) because the Examiner believes these claims are unpatentable in view of International Application Publication No. WO 02/099736 by Lett (hereafter "Lett") in view of *The Design of a Simulation System for Persistent Object Storage Management* (University of Colorado, March 1993) by Cook (hereafter "Cook"). See Office Action at page 5. Applicants respectfully traverse this rejection.

Applicants respectfully submit that Lett and Cook, taken either singly or in any reasonable combination, fail to disclose or suggest all of the features of claims 1-3, 5-14, 16-23, 25-30, and 32-36 as amended. For example, neither Lett nor Cook disclose or suggest at least:

*register an area of memory that constitutes a simulation context for a subsystem in the block diagram model, the subsystem associated with a first memory layout;*

*modify the model of the biological process based on the comparison to correct the model of the biological process, wherein modifying the model affects a memory layout of the subsystem to result in a second memory layout; and*

*use the stored simulation context to restore the simulation to a state consistent with the simulation context after the simulation finishes,*

which is present in claims 1-3, 5-14, 16-23, 25-30, and 32-36 as amended.

In order to expedite prosecution, Applicants amend the claims to clarify an aspect of storing the simulation context and restoring a simulation from the stored context. As noted in the Specification at pages 35-37, in some circumstances a local indexing scheme may be used to selectively restore parts of the model. Accordingly, the simulation context for the subsystem may be restored even though a modification to the model may affect the memory layout of the subsystem. See Specification at page 36, lines 14-16.

The Examiner recognizes that Lett does not disclose or suggest “storing a simulation context of the simulation” ... See Office Action at page 8. Accordingly, Lett does not disclose or suggest a *stored simulation context for a subsystem*, or *use the stored simulation context to restore the simulation to a state consistent with the simulation context after the simulation finishes*.

Applicants respectfully submit that the addition of Cook fails to cure the factual deficiencies of Lett with respect to these features of the amended claims. Cook describes a simulation for evaluating a persistent object storage management system. That is, given a preexisting system that persistently stores objects, Cook is interested in evaluating how efficient a persistent object storage management algorithm (e.g., garbage collection) operates. See Cook at page 1, §1, first paragraph. Cook notes that one method of

evaluating persistent object storage management algorithms involves simulating of the algorithm. See Cook at page 3, §2. Cook describes a new simulation method for evaluating the efficiency of these algorithms. See Cook at page 4, §2, final paragraph.

Although Cook mentions a “simulation system,” Cook does so with respect to evaluating an effectiveness of a object deletion algorithm that may be used to by a simulation system to delete persistent objects. Nowhere does Cook register an area of memory that constitutes a simulation context for a subsystem in the block diagram model, the subsystem associated with a first memory layout.

The Examiner argues that Cook teaches “reading memory, performing simulation, and passing the data with changes back to the persistent data system for the benefit of obtaining persistence (i.e. consistency and improving overall efficiency.” See Office Action, page 8. The Examiner argues that this teaching inherently “requires registering [related data] to specific locations (i.e. area) within the physical memory.” See Office Action at page 8.

However, even assuming *arguendo* that Cook registers portions of memory that correspond to variables used in a data interaction, Cook still fails to modify the model ... wherein modifying the model affects a memory layout of the subsystem to result in a second memory layout; and use the stored simulation context to restore the simulation to a state consistent with the simulation context after the simulation finishes, which is present in the claims as amended. Cook is entirely silent with respect to these features of the amended claims.

For at least the reasons set forth above, Applicants respectfully submit that Lett and Cook, taken either singly or in any reasonable combination, fail to disclose or suggest all of the features of claims 1-3, 5-14, 16-23, 25-30, and 32-36. Therefore, Applicants respectfully request that the above 35 U.S.C. § 103(a) rejection of claims 1-3, 5-14, 16-23, 25-30, and 32-36 be withdrawn.

B. Claims 4, 15, 24, 31, and 37-50

In the Office Action, claims 4, 15, 24, 31, and 37-50 stand rejected under 35 U.S.C. § 103(a) because the Examiner believes these claims are unpatentable in view of Lett and Cook, and in further view of International Patent Application No. WO 2003/042857 to Fox (hereafter “Fox”), and U.S. Patent No. 6,882,940 to Potts (hereafter “Potts”). See Office Action at page 9. Applicants respectfully traverse this rejection.

Applicants respectfully submit that Lett, Cook, Fox, and Potts, taken either singly or in any reasonable combination, fail to disclose or suggest all of the features of claims 4, 15, 24, 31, and 37-50. For example, neither Lett, Cook, Fox, nor Potts disclose or suggest at least *register an area of memory that constitutes a simulation context for a subsystem in the block diagram model, the subsystem associated with a first memory layout; modify the model of the biological process based on the comparison to correct the model of the biological process, wherein modifying the model affects a memory layout of the subsystem to result in a second memory layout; and use the stored simulation context to restore the simulation to a state consistent with the simulation context after the simulation finishes*, which are present in claims 4, 15, 24, 31, and 37-50.

Claims 4, 15, 24, 31, and 37-50 depend from claims 1, 12, 22, and 28, respectively; independent claims 37 and 45 each include *register an area of memory that constitutes a simulation context for a subsystem in the block diagram model, the subsystem associated with a first memory layout; modify the model of the biological process based on the comparison to correct the model of the biological process, wherein modifying the model affects a memory layout of the subsystem to result in a second memory layout; and use the stored simulation context to restore the simulation to a state consistent with the simulation context after the simulation finishes*, and claims 38-44 and 46-50 depend from claims 37 and 45, respectively. Each dependent claim therefore includes all of the features of its respective parent claim.

As a result, the combination of Lett, Cook, Fox, and Potts must support a valid 35 USC 103 rejection of claims 1, 12, 22, 28, 37, and 45 in order to support a rejection of dependent claims 4, 15, 24, 31, and 37-50. As previously discussed in connection with claim 1, Lett, Cook, and Beckerle do not disclose or suggest *register an area of memory*

*that constitutes a simulation context for a subsystem in the block diagram model, the subsystem associated with a first memory layout; modify the model of the biological process based on the comparison to correct the model of the biological process, wherein modifying the model affects a memory layout of the subsystem to result in a second memory layout; and use the stored simulation context to restore the simulation to a state consistent with the simulation context after the simulation finishes* which is present in claims 1, 12, 22, 28, 37, and 45.

Combining reference Fox and Potts with references Lett and Cook does nothing to remedy the shortcomings of Lett and Cook with respect to supporting a §103 rejection of claims 1, 12, 22, 28, 37, and 45.

Fox is generally concerned with methods for inferring a network model of the interactions of biological molecules. See Fox at paragraph [0005]. Fox is not concerned with a simulation context, and does not *register an area of memory that constitutes a simulation context for a subsystem in the block diagram model, the subsystem associated with a first memory layout; modify the model of the biological process based on the comparison to correct the model of the biological process, wherein modifying the model affects a memory layout of the subsystem to result in a second memory layout; and use the stored simulation context to restore the simulation to a state consistent with the simulation context after the simulation finishes*, as recited in independent claims 1, 12, 22, 28, 37, and 45. Indeed, the Examiner relies on Fox only for modeling a chemical reaction. See Office Action at pages 10-11.

Potts is generally concerned with monitoring, for example, glucose values in order to predict a hypoglycemic event in a subject. See Potts at column 2, lines 3-10. Accordingly, Potts is not concerned with a simulation context, and does not *register an area of memory that constitutes a simulation context for a subsystem in the block diagram model, the subsystem associated with a first memory layout; modify the model of the biological process based on the comparison to correct the model of the biological process, wherein modifying the model affects a memory layout of the subsystem to result in a second memory layout; and use the stored simulation context to restore the simulation*

*to a state consistent with the simulation context after the simulation finishes*, as recited in independent claims 1, 12, 22, 28, 37, and 45. Indeed, the Examiner relies on Potts only for user-settable thresholds and functionality for generating an alert when the thresholds are exceeded. See Office Action at page 11.

Therefore, Lett, Cook, Fox, and Potts, whether taken alone or in any reasonable combination, do not disclose or suggest all of the features of claims 1, 12, 22, 28, 37, and 45 or of dependent claims 4, 15, 24, 31, and 37-50. Therefore, Lett, Cook, Fox, and Potts cannot support a valid 35 USC §103 rejection of independent claims 1, 12, 22, 28, 37, and 45 or of claims depending from claims 1, 12, 22, 28, 37, and 45, namely claims 4, 15, 24, 31, and 37-50. In view of the above remarks, reconsideration and allowance of dependent claims 4, 15, 24, 31, and 37-50 is respectfully requested.

### III. Double Patenting Rejections

In the Office Action, claims 1, 12, 22, and 28 are provisionally rejected on the ground on non-statutory obviousness-type double patenting as being unpatentable over claims 1, 2, and 3 of copending Application No. 10/783,552 in view of Lett and Cook. See Office Action at page 14.

As the final form of the claims in the instant application has yet to be ascertained, Applicants respectfully request that the above double patenting rejections be held in abeyance. If a terminal disclaimer is still deemed necessary after the final form of the claims in the instant application has been ascertained, Applicants will file a terminal disclaimer accordingly.

**CONCLUSION**

In view of the foregoing claim amendments and remarks, Applicants believe that all claims should be passed to allowance. Should the Examiner feel that a teleconference would expedite the prosecution of this application, the Examiner is urged to contact the Applicants' attorney at (617) 573-4700.

As Applicants' remarks with respect to the Examiner's rejections and/or objections overcome the rejections and/or objections, Applicants' silence as to certain assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections and/or objections (e.g., whether a reference constitutes prior art, reasons to modify a reference and/or combine references, assertions as to dependent claims) is not a concession by Applicants that such assertions are accurate or that such requirements have been met, and Applicants reserve the right to dispute these assertions/requirements in the future.

Please charge any shortage or credit any overpayment of fees to our Deposit Account No. 12-0080, under Order No. MWS-109RCE3. In the event that a petition for an extension of time is required to be submitted herewith, and the requisite petition does not accompany this response, the undersigned hereby petitions under 37 C.F.R. § 1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized to be charged to the aforementioned Deposit Account.

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Respectfully submitted,

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